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Alexa Firmenich · Follow

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*“The cynic knows the price of everything and the value of nothing.” Oscar Wilde*



Source: Unsplash

I'd like to start us off here — where it's real.

Our exquisite home is in pain. The humans know it, as they jostle and perform, drunk off self-interest and inertia in an Egyptian desert conference. The corals know, as they turn numbed and still, calcified to the grave. The tree-dwellers know, as the last tree plummets chainsaw-gnawed to the ground. And the river knows, as hundreds of salmon choke upstream, caught immovable by scorching summer drought, festering putrid on crumbling banks.

There is a class of solutions proposed for this planetary predicament that can broadly be categorized under the banner of **'market solutions to climate change'**.

The idea goes like this. Nature has been left off the balance sheet. We have majorly underpriced and undervalued the real assets that our entire economy is built upon. The most effective way to steer us off-course from self-extinction is to correct for these market failures. If we can manage to 'price' nature correctly, the calculation becomes more honest. Harms are exposed, incentives adjust, positive actions are rewarded and can be scaled. What is measured will be managed. And with this, we accelerate the flow of desperately-needed capital towards the regeneration of nature.

Much of this is not technically incorrect, but some are skeptical. They have termed this "the monetization of nature". The financialization of the sacred. Selling the Earth in order to save it.

These are not compliments.

There is rising concern among civil society, NGOs, think tanks, indigenous peoples, local communities and several leading economists, that this rapid encroachment of financial markets into nature is a harbinger of dangerous times to come. **They foresee this solutionism as yet another wave of neo-colonial extraction, rent-seeking behavior, speculative volatility, inequality perpetuation, and a further impoverishment of our spiritual relationship to other life.**

These are very valid suspicions. As I see it, the dangers of financializing nature broadly fall into the following categories: **ecological, behavioral, social and systemic**. I've summarized in greater depth at the end of this piece each of these concerns and their historical precedents. Here is a general overview:

- 1) **Ecological:** The kinds of ecosystems that capitalism constructs neither preserve nor produce the ecosystems they were intended to protect.*
- 2) **Behavioural:** Market-based, instrumental values are proven to erode our intrinsic, civic values for 'doing the right thing'. They trigger further alienation and commercialize our morals.*
- 3) **Social:** The promised financial rewards will benefit the already rich, concentrating wealth in a new land-grab, and will not trickle down to the communities who live on the ground.*
- 4) **Systemic:** This is all a distraction from addressing the actual paradigm shift that is required — one that questions exponential growth and free market consumerism, along with the perverse power structures that hold the current regime in place.*

The financial system is a powerful global coordination mechanism that should be used to catalyse resources into the regeneration of nature. But as described above, the wave of developments in nature-based securitization such as credits, bonds, offsets and ecosystem service payments *must* be paired with a parallel evolution in other domains. It's obvious, but worth remembering that it is simply not up to the market to design new value systems and political economies. As David Bollier says, "We must not confuse the need for better markets with the need for a different, more appropriate tool, using an overarching ethical lens to guide our political economy".

So — we must turn to governance and deeper system architecture, and ask, what kinds of policies, guardrails or governance tools should we be designing or advocating for?

**I've begun noting a non-comprehensive list based off conversations and insights from a broad range of stakeholders. It's growing, and intended to provoke further thought, so I invite anyone to reach out and offer their contribution. Here are sketches of some ideas...**

### **Protecting against the privatization of gains**

- Traceability and accountability mechanisms need to be in place — not only to ensure that local communities receive their stake of the income generated from selling assets like ecosystem services and biodiversity, but indeed that a *majority* of the revenue returns to place and community. I call this the 'naturalization of gains'. Capital should follow the rules of nature herself and circulate back into the system it was generated from — and here, we can imagine designated re-investments for further project development, design, and local land management. It makes no sense that wealthy landowners

should benefit from public compensation schemes, borne from taxpayer money, and then privatize the gains.

- Going a step further, any gains generated from secondary market transactions, at any point in the future, should be distributed back to the originator of the credits, and here I again refer to the land and local people (because yes, speculation, derivatives and a host of arbitrage options will begin appearing on the market; imagine shorting on the presence of a dragonfly).

- A financial transaction tax on all these exchanges could also be considered but is improbable to put in place, considering how difficult this has been in the past.

- For all the above, secure land tenure and local power structures must be factored in. A sudden influx of outside capital can corrupt micro-political environments, producing uneven distribution of conservation benefits across intersecting lines of gender, caste, and social class. (Conservation basic income: A non-market mechanism to support convivial conservation, Robert Fletcher\*, Bram Büscher). And let's not forget that the Western notion of freehold transferrable title has often been imposed on local communities who previously held complex, commons-based tenure arrangements.
- Several groups have issued working papers specifically on biodiversity credit governance and approaches: check them out here, here, and here. Oh wait and there's more — here you go, and and voila.
- To this, I would add that information symmetry/transparency on the source of offsets is a must (especially carbon), so that local stakeholders who are receiving financing for creating credits are able to make an

informed decision as to whether their forest restoration project, for example, is being funded by ongoing Tar Sands extraction in a distant Canadian landscape.

## **Rights of Nature**

- This is a mechanism where natural beings (rivers, mountains, species) are recognised as legal persons. Pella Thiel from Rights of Nature Sweden inspired me here by reminding me that when there is a RoN law, the land could legally 'own itself' and all distributions return to the rights-bearing entity. The process would need to be mediated by human beings, who advocate and deploy capital on behalf of the ecosystem.

- She says, "Just as the value of humans is not measurable, the value of Nature cannot be limited to the ecosystem services it performs. Living beings have an intrinsic value, and law is a better tool for that. In a culture where the view of nature as mere object and property has been a cornerstone since the development of Western law, including more-than-human beings is a major shift. With recognition of legal rights as a foundation, the tool of economics can be used in a healthy manner."

- Logically this is a space where blockchain would have great utility. In a similar space of 'liberating nature' (where non-humans have their own digital identity) Sovereign Nature Initiative hosts various accelerators and hackathons that harness new technologies based on eco-centricity. Jonathan Ledgard has some provoking ideas here too around concepts of 'interspecies money'.

## **No such thing as Offsets**

- When it comes to biodiversity (and in reality, even carbon), no unit of nature is ever fungible. Biodiversity is highly specific and unique to every

location. This means that we should prohibit any actor from replacing ecosystems with fake equivalents in another geography — the result would be a net loss for nature. We can look to the UK for a cautionary tale that involves the government's Biodiversity Net Gain Unit and the poor protagonist of a great crested newt.

- This is why several biodiversity credit working groups such as the WEF Integrity and Governance Principles (under development) state that “development or purchase of a biodiversity credit should not support a claim of an entity being “nature positive”. Biodiversity credits should not be used to make “offsetting” claims.”
- For credits, the debate exists as to whether credits should be retired (not allowed to create a market that generates no additional biodiversity gains, as intermediaries would take a too significant share) or to limit the number of possible transactions per certificate, so as to avoid excessive speculation (as suggested by carbone4).

## Non-reductionism

- If biodiversity is measured, we need to ensure that the complex structure of the whole ecosystem is being factored in, and not just the individual parts (such as single species). Otherwise, we will miss critical aspects of ecosystem integrity such as phylogenetics, food webs, functional traits and others which are required for the whole system to regenerate and thrive. This holistic assessment of the interconnectedness of nature is something we are working on at the Crowther Lab in ETH Zurich.

## Development of inherent care for nature

- As Sian Sullivan writes, “Allocating financial value to the environment does not mean that we will embody practices of appreciation, attention, or even of love in our interrelationships with a sentient, moral and agential non-

human world.” Whilst we need to develop smart market and governance mechanisms, nothing can replace the relational values that are needed to uphold the conservation and repair of nature over long time scales. These are the things that nourish us as a civilisation. As Laura Ortiz Montemayor from SVX Mexico says, “The financial sector needs to fall in love with life in order for finance to serve as a the (temporary) bridge towards prosperity for all.”

- Here, the point is simply, let’s not lose sight of the deeper worldview shift that is necessary, and can be cultivated in a whole host of ways — most of which involve your personal, intimate involvement in place and landscape. John Thackara has as rich a library as any I’ve seen on this.

(Meanwhile, this excellent paper came out on “Going beyond market-based mechanisms to finance nature-based solutions and foster sustainable futures” by Oxford Nature Based Solutions institute and others, for additional reading worth checking out).

**More to come on the above. Thank you for reading, and please find below a further elaboration of critiques on marketizing nature.**

## **APPENDIX**

*Summary of concerns around market-based solutions for restoring nature*

**Ecological:** The kinds of ecosystems that capitalism constructs neither preserve nor produce the ecosystems they were intended to protect.

- The history of ecosystem service markets holds an important precedent. One of the oldest and most robust environmental markets is stream



mitigation banking (scaled up under the US Clean Water Act). This permitted the removal of an ecosystem in one place and ‘mitigating’ by creating it elsewhere. Think of it like an offset.

- Starting in the 1950s, a group of geomorphologists began quantifying landforms. This gave river morphology a (false) sense of rule-like behavior and predictability. These models were then used to underpin stream mitigation markets. They prioritized stability over anything else, and any instability meant that the designer got something wrong. A key indicator that was used was riverbank erosion. If a restored stream had any type of erosion, even erosion caused by a stream restoring its cycle, then that project was considered a failure. However, rivers are sensual, they move, change shape, and need to experience fluctuations in order to properly function.

- These equations built a multi-billion-dollar ecosystem service market and changed the entire hydrologic landscape of the US, not for the better. Today, we witness similar dynamics occurring with carbon markets (think, largescale tree farm monocultures), ecosystem service models, and biodiversity. The pattern is the same — the more standard the project, more efficient the process is for both banker and regulator. This disincentivizes innovation and complexity, abstracting ecosystems into the narrow metrics that we deem important at any given time (excerpts from *Streams of Revenue: The Restoration Economy and the Ecosystems It Creates* by Martin Doyle and Rebecca Lave)

**Behavioural:** Market-based, instrumental values have been proven to erode and degrade our intrinsic, civic values for ‘doing the right thing’.

- Many academics like Harvard professor and philosopher Michael Sandel have documented how market-based systems, carried out under unequal economic background conditions, ‘force’ choices that are not truly voluntary onto others. Here I was reminded by a personal anecdote of a conversation I had with a local community member who said, “We are entering the carbon market in order to fight the carbon market. These forces are coming, no matter what, so we may as well play the game”.

- Similarly, research has proven that moral goods can be degraded by market valuation and exchange. Market norms can crowd out non-market norms. Global markets in pollution are maybe efficient but they “outsource a civic obligation” and undermine a spirit of shared restraint and sacrifice that a responsible environmental ethics requires. And it seems that once a monetary payment has eroded the moral obligation to show up on time, the old sense of responsibility proves difficult to revive ([What Money Can't Buy: The Moral Limits to Markets](#)).

- Economist Fred Hirsch called this “the commercialization effect”, in which supplying a product or service on commercial terms “rather than on some other basis — such as informal exchange, mutual obligation, altruism or love, or feelings of service or obligation” changes it. Civic virtue, altruism, solidarity — use it or lose it. Markets do not help us exercise these muscles.

**Social:** The promised financial rewards of such markets will serve to prop up already wealthy actors, and will not trickle down to the communities who live in the land itself

**Systemic:** This is all a distraction unless it also addresses the deeper worldview shift — one that questions free-market, neoliberalism, power and

exponential growth assumptions (Conservation Revolution — Bram Buscher and Robert Fletcher).

For the last two points, think to the phenomenon of carbon cowboys, displacement of indigenous people from their lands, and the landgrab occurring across the world when people realize that you can spin a decent profit off restoring land and claiming the (sometimes dubious) carbon uplift. I think most people would also agree that they'd like to live in a world where our highest potential lies in intrinsic, relational values with each other and nature, where we ask to live in right relationship with a forest, not because of its price or income it can generate on our behalf, but because we feel a sense of kinship and care to the forest.

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**Written by Alexa Firmenich**

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Evergreen Core

Dec 21, 2022



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Adam French

Dec 16, 2022



This is amazing! I love how you think. I'd love to connect and chat more about your work - I'm trying to design regenerative biz models and organizations and realizing internal shifts are necessary for this work. Would be cool to chat about the... [more](#)



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Thomas Morgan aka TMO

Jan 2, 2024



dangers

our Ecological Ensurance model and technical solution addresses these as well as your further point of Rights of Nature and ecosystems actually owning themselves. Would love to discuss this along with Biocomplexity of course!

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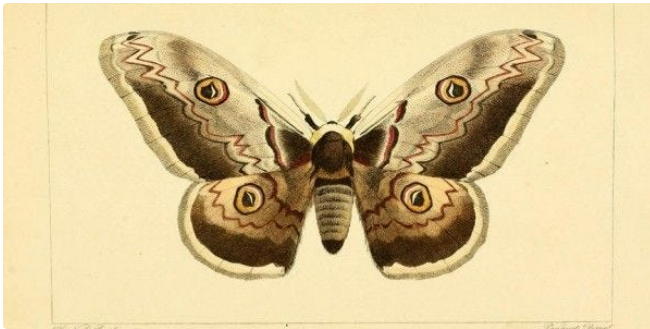
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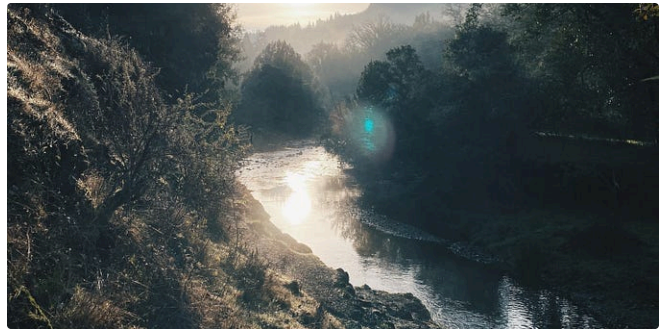
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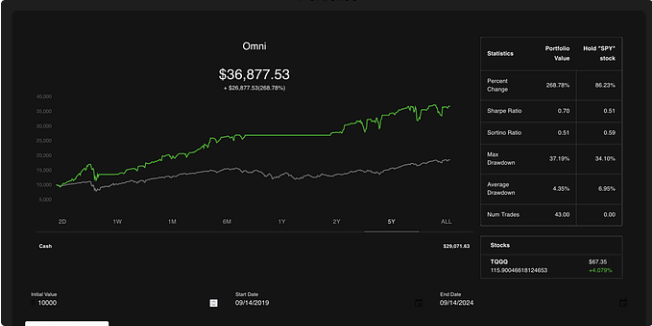
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